

**UNITED STATES NAVAL ACADEMY
MECHANICAL ENGINEERING DEPARTMENT
ANNAPOLIS, MD 21402**

August 2002

From: Course Administrator, EM375

To: Students Enrolled in EM375

Subj: COURSE OBJECTIVES AND POLICY

Text: "Introduction to Engineering Experimentation," by Wheeler & Ganji

Software: Mathcad, by the MathSoft Inc., available on the network in R107, R108, and R109

Objective:

The objective of the course is to provide the student with a working knowledge of the theory and practical considerations associated with contemporary experimental procedures, methods and design strategies. The student will gain an appreciation for measurement error and its propagation, signal acquisition and validation, instrument response, and modern industrial strategies for planning and designing experiments.

Emphasis will be placed on statistical experimental methods, instrument types and responses, computer aided data reduction, evaluation of system performance through experimentation and modeling, and elements of report writing. These skills will be beneficial throughout the design experience.

Organization and Content:

The course includes two recitations and a laboratory period each week. The text material and laboratory assignments are described in the course syllabus.

Homework. Homework is assigned and will be graded at the discretion of the individual instructor. Homework will be graded on content, effort, and presentation. Homework must be the work of the individual student, except where group work is authorized by the instructor. For individual work, you may consult with the instructor or other students in order to gain an understanding of the solution technique or the approach to a problem. Having gained this understanding, the student will work the problem as an individual. Under no circumstances is it acceptable to copy another student's solution or use a solution manual.

Laboratory. The laboratory assignments in this course involve varying degrees of group effort. The amount of collaboration will be specified for each assignment. As with homework, students are permitted to consult with each other on the approach to any problem. In addition, the names of partners and other student consulted must be noted on the cover sheet for the assignment. Submitted laboratory exercises will vary from

brief summaries of the data up to full written formal reports. The instructor will specify the requirements for each assignment.

Exams. Three mid-semester exams and a final exam will be administered at the dates indicated on the syllabus.

Project. There is a group project for this course. All aspects of the data collection and reduction, and the final report, are group exercises.

Grades. Final grades for this course are based as follows:

Mid semester exams (3)	30%
Final exam	25%
Laboratory reports/Assignments	15%
Project	20%
Homework/Instructor	10%

Policies:

1. All assigned laboratory exercises, reports, exams and the project must be completed as a requirement to pass this course.
2. Any work submitted late, without the instructor's prior approval, will only be accepted at the discretion of the instructor and with substantial grade penalty.
3. Examinations are scheduled in advance, and only valid medical excuses will be accepted for missing an examination without the instructor being notified in advance.
Note that in the "Table of Priorities," regularly scheduled examinations take precedence over pre-commissioning physicals.
4. The final examination schedule will be strictly followed. No exceptions will be given without prior approval.
5. Students are responsible for all lecture material. Most material will come from the text, but there will be material covered that is not in the text.
6. If there is any doubt about the level of collaboration allowed on an assignment, the student must consult the instructor prior to taking action.

Colin P. Ratcliffe
Associate Professor